

## AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** An isolated pathogenic *Leptospira* bacterium, wherein said bacterium comprises a genetic sequence selected from the group consisting of:

a) SEQ ID NO: 1;

b) a sequence having at least 99% identity to SEQ ID NO: 1, and

c) a sequence complementary to one of the foregoing sequences, belongs to serovar Hurstbridge, wherein said bacterium is cross-reactive in a cross-agglutination absorption assay with the *Leptospira fainei* strain WKID deposited under AGAL Accession No. N95/69684

b) ~~belongs to sero group Hurstbridge and cross-agglutinates with share group antigens of the *Leptospira fainei* strain WKID deposited under AGAL Accession No. N95/69684, wherein said bacterium does not cross-agglutinate with the members of other *Leptospira* groups; or~~

e) ~~belongs to the species *Leptospira fainei* and wherein said bacterium comprises genomic DNA which is at least 40% homologous to the genomic DNA derived from *Leptospira fainei* strain WKID deposited under AGAL Accession No. N95/69684.~~

2. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 1, wherein said bacterium grows in media containing 8-azaguanine and at a temperature in the range from about 13°C to about 37°C.

3. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 2, wherein said bacterium grows in media containing at least 100 µg/ml 8-azaguanine.

4. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 2, wherein said bacterium grows at temperatures in the range from about 13°C to about 37°C.

5. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 1, wherein said bacterium is a pathogen that infects a mammal selected from the group consisting of: human, livestock animal, and companion animal.

6. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 5, wherein said bacterium infects pigs.

7. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 5, wherein said bacterium infects humans.

8. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 5, wherein said bacterium infects bovines.

9. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 5, wherein said bacterium produces the symptoms of leptospirosis in a human or other animal which it infects.

10. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 1, wherein said bacterium induces reproductive disease.

11. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 10, wherein the reproductive disease induced by said bacterium comprises a lower rate of farrowing in an infected animal compared to a non-infected animal.

12. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 10, wherein the reproductive disease induced by said bacterium comprises fetal death *in utero* or spontaneous abortion.

13. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium according to claim 10, wherein the reproductive disease causes the weaning-to-mating period for the offspring of an infected animal to be longer than for the offspring of a non-infected animal.

14. **(Original)** The isolated pathogenic *Leptospira* bacterium according to Claim 10, wherein the reproductive disease induced by said bacterium comprises seasonal infertility.

15. **(Canceled)**

16. **(Canceled)**

17. **(Canceled)**

18. **(Canceled)**

19. **(Currently amended)** The isolated *Leptospira* bacterium according to claim 1, wherein the bacterium has the following characteristics of the microorganism deposited under AGAL Accession No. N95/69684:

the bacterium belongs to the species of *Leptospira fainei*,

the bacterium grows at temperatures in the range from about 13°C to about 37°C,

the bacterium grows in media containing at least 225 mg/ml 8-azaguanine,

the bacterium is capable of infecting a livestock or a companion animal; and  
the bacterium is capable of inducing reproductive disease in at least one of said animals.

20. **(Previously presented)** An isolated *Leptospira* bacterium consisting of *Leptospira* strain WKID (AGAL Accession No. N95/69684).

21.-74. **(Canceled)**

75. **(Previously presented)** The isolated *Leptospira* bacterium according to claim 5, wherein said livestock and companion animals are selected from the group consisting of: pigs, bovines, sheep, goats, horses, deer, alpaca, dogs and cats.

76.-123. **(Canceled)**

124. **(Previously presented)** The isolated *Leptospira* bacterium according to claim 1, wherein said bacterium is a non-infectious or attenuated bacterium.

125. **(Previously presented)** The isolated *Leptospira* bacterium according to claim 124, wherein said attenuated bacterium consists of a killed isolated bacterium.

126. **(Previously presented)** The isolated pathogenic *Leptospira* bacterium of claim 124 in combination with a pharmaceutically-acceptable carrier or diluent.

127. **(New)** An isolated pathogenic *Leptospira* bacterium, wherein said bacterium comprises a genetic sequence having sufficient homology with SEQ ID NO: 1, wherein said bacterium is cross-reactive in a cross-agglutination absorption assay with the *Leptospira* strain WKID deposited under AGAL Accession No. N95/69684.